

**CHAPTER 1. Drawing Conclusions From Data**

1. Analyzing Data
2. Standard Deviation
3. Samples and Surveys
4. Normal Distributions

**CHAPTER 2. Linear Equations, Inequalities, and Functions**

1. Solving Equations
2. Solving Inequalities
3. Linear Functions and Slope-Intercept Form
4. Families of Functions
5. Absolute Value Functions and Graphs
6. Two-Variable Inequalities
7. Solving Systems of Equations
8. Systems of Inequalities
9. Systems With Three Variables
10. Solving Systems Using Matrices

**CHAPTER 3. Quadratic Functions and Equations**

1. Quadratic Functions and Transformations
2. Standard Form of a Quadratic Function
3. Factoring Quadratic Expressions
4. Quadratic Equations
5. Completing the Square
6. The Quadratic Formula
7. Quadratic Systems
8. A New Look at Parabolas
9. Circles in the Coordinate Plane

**CHAPTER 4. Polynomials and Polynomial Functions**

1. Polynomial Functions
2. Adding, Subtracting, Multiplying, and Dividing Polynomials
3. Polynomials, Linear Factors, and Zeros
4. Solving Polynomial Equations
5. Dividing Polynomials
6. Theorems About Roots of Polynomial Equations
7. The Fundamental Theorem of Algebra
8. The Binomial Theorem
9. Polynomial Models in the Real World
10. Transforming Polynomial Functions

**CHAPTER 5. Rational Expressions and Functions**

1. Simplifying Rational Expressions
2. Multiplying and Dividing Rational Expressions
3. Adding and Subtracting Rational Expressions

4. Inverse Variation
5. The Reciprocal Function Family
6. Rational Functions and Their Graphs
7. Solving Rational Equations

#### **CHAPTER 6. Radical Expressions and Functions**

1. Roots and Radical Expressions
2. Multiplying and Dividing Radical Expressions
3. Binomial Radical Expressions
4. Rational Exponents
5. Solving Square Root and Other Radical Equations
6. Function Operations
7. Inverse Relations and Functions
8. Graphing Radical Functions

#### **CHAPTER 7. Exponential and Logarithmic Functions**

1. Exploring Exponential Models
2. Properties of Exponential Functions
3. Logarithmic Functions as Inverses
4. Properties of Logarithms
5. Exponential and Logarithmic Equations
6. Natural Logarithms

#### **CHAPTER 8. Trigonometric Functions**

1. Exploring Periodic Data
2. Angles and the Unit Circle
3. Radian Measure
4. The Sine Function
5. The Cosine Function
6. The Tangent Function
7. Translating Sine and Cosine Functions
8. Reciprocal Trigonometric Functions
9. Trigonometric Identities
10. Area and the Law of Sines
11. The Law of Cosines

#### **CHAPTER 9. Sequences and Series**

1. Mathematical Patterns
2. Arithmetic Sequences
3. Geometric Sequences
4. Arithmetic Series
5. Geometric Series

#### **CHAPTER 10. Applying Geometric Concepts**

1. Applying Constructions, no exercises available
2. Solving Density and Design Problems
3. Perimeters and Areas of Similar Figures

4. Geometric Probability
5. Space Figures and Cross Sections
6. Areas and Volumes of Similar Solids
7. Locus: A Set of Points

#### **CHAPTER 11. Connecting Algebra and Geometry**

1. Perimeter and Area in the Coordinate Plane
2. Areas of Parallelograms and Triangles
3. Areas of Trapezoids, Rhombuses, and Kites
4. Polygons in the Coordinate Plane

#### **CHAPTER 12. Circles**

1. Circles and Arcs
2. Areas of Circles and Sectors
3. Tangent Lines
4. Chords and Arcs
5. Inscribed Angles
6. Angle Measures and Segment Lengths